

Work Order ID 59618

Wednesday, June 09, 2010 8:40:04 AM

Page 1

Item ID: D3407-1

Accept

Setup Start

Revision ID:

Stop

Item Name: Stem

Start Date: 6/9/2010 Start Qty: 20.00

Cust Item ID:

Required Date: 6/16/2010 Req'd Qty: 20.00

Customer:

Reference:

Approvals:

Process Plan:

Date: 10-6-09

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3407

Rev E

100

0.00



DOOSAN LATHE

Doosan

Memo

0.00

Doosan Lathe

1-Turn as per Folio FA596 Rev: AA & Dwg D3407 Rev: E □2-Deburr

SL 10/06/18 (20)

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

SL 10/06/18 (20)

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

SL 10/06/18 (20) /

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 59618

Wednesday, June 09, 2010 8:40:04 AM



Page 2

Item ID: D3407-1

Accept



Setup Start



Revision ID:

Item Name: Stem

Stop



Start Date: 6/9/2010 Start Qty: 20.00



Cust Item ID:

Required Date: 6/16/2010 Req'd Qty: 20.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

Identify as per dwg & Stock Location EL

0.00



Packaging

Memo

0.00

Packaging

10-6-18 20x SP

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/06/21 MF

MF 10-6-21

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NOTE: Date & initial all entries

Picklist Print

Wednesday, June 09, 2010 8:40:08 AM

Page 1

Work Order ID: 59618

Parent Item: D3407-1

Parent Item Name: Stem

Comments: IPP Rev:A 05.10.18 New issue KJ/EC
IPP Rev:B Now on Doosan 08-05-14 JLM Verified By:DD
IPP Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC

Start Date: 6/9/2010

Required Date: 6/16/2010

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Qty per Kit	Total	Qty	Date	Status
M174R0.750		Purchased	No			100	f	43.7000	0.366	7.705263			



17-4 round bar .750



Location

Loc Qty

Loc Code

MAT

43.7

114488

43.7

- 9.15 JL 10/06/18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	59618
Description: Tow Ring		Part Number:	D3407-1
Inspection Dwg: D3407 Rev: E		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010					
1/4-28 UNF	Max: 0.2668 Min: 0.2635					
Major Ø	Max: 0.249 Min: 0.2425					
Ø0.625	+/-0.010					
Ø0.363	+/-0.010					
Ø0.750	+/-0.010					
R0.100	+/-0.010					
0.470	+/-0.010					
0.500	+/-0.010					
3.250	+/-0.010					
4.250	+0.000/-0.010					
5.270	+/-0.010					
0.150	+/-0.010					
0.550	+/-0.010					
0.625	+/-0.010					
0.250	+0.010/-0.000					

Same as w/o 59428

Measured by:	JL
Date:	10/06/18

Audited by:	DT
Date:	10/06/18

Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.09.19	New Issue	KJ/JLM	
B	07.07.18	Tolerances for diameters updated per Machinists	KJ/JLM	
C	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD	

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

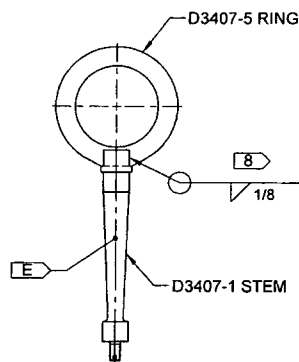
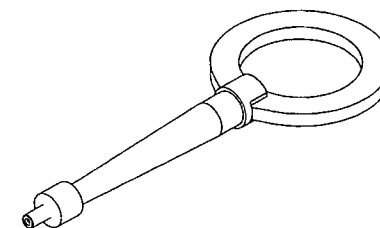
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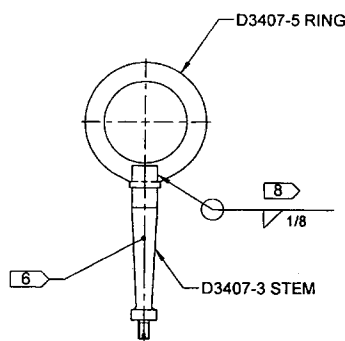
NOTE: Date & initial all entries

QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM

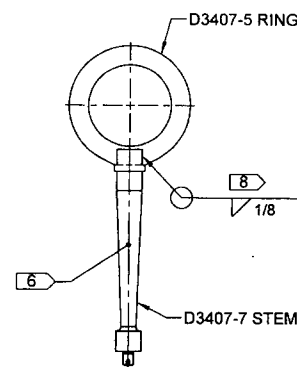
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 59618
B210-6-09



D3407-041 TOW RING



D3407-043 TOW RING



D3407-045 TOW RING

RELEASED

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
 - 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
 - 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/-3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/-3 (ZN B6-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/-3 LONGER FOR FIT W/WASHER	CP	05.09.09
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.06.17
A	NEW ISSUE	CP	05.03.16
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.23		
DART AEROSPACE USA, INC. PORT HADLOCK, WA			
DRAWING NO. D3407		REV. E SHEET 1 OF 5	
TITLE TOW RING		SCALE NTS	
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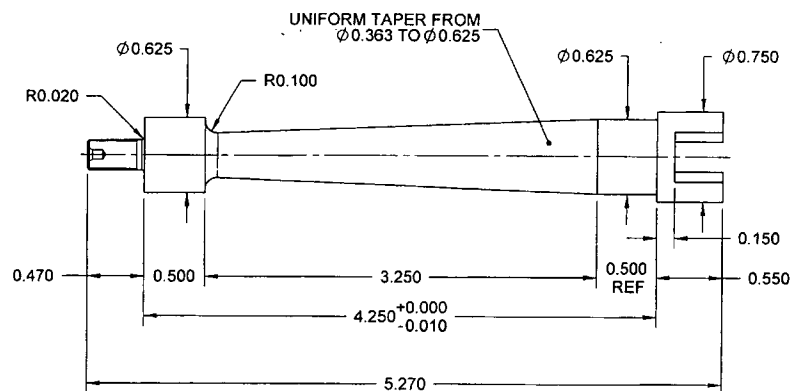
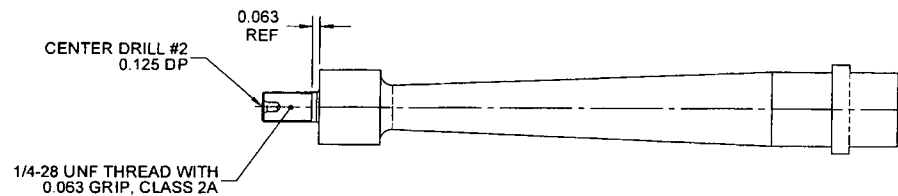
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

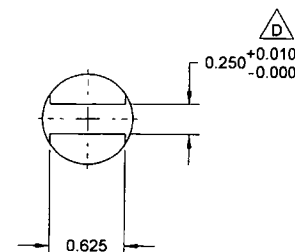
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3407-1 STEM







w/6 59618

RELEASED

NOTES:

- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.33 lbs

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MFG. APPR.		D3407	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
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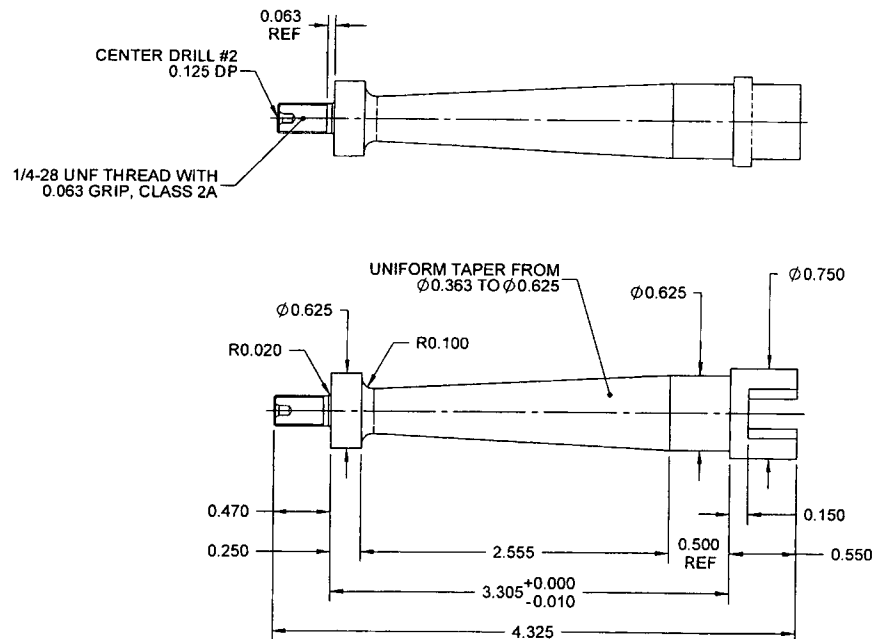
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

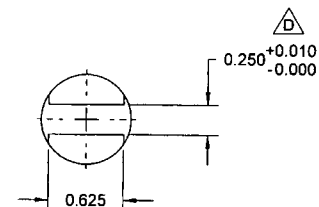
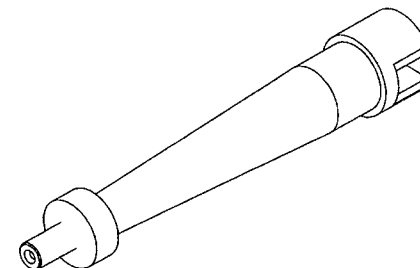
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3407-3 STEM



W659018

RELEASED
07-08-01 MJP

- NOTES:**
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

DESIGN	40	DART AEROSPACE USA, INC.	
DRAWN	Per	PORT HADLOCK, WA	
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MFG. APPR.		D3407	SHEET 3 OF 5
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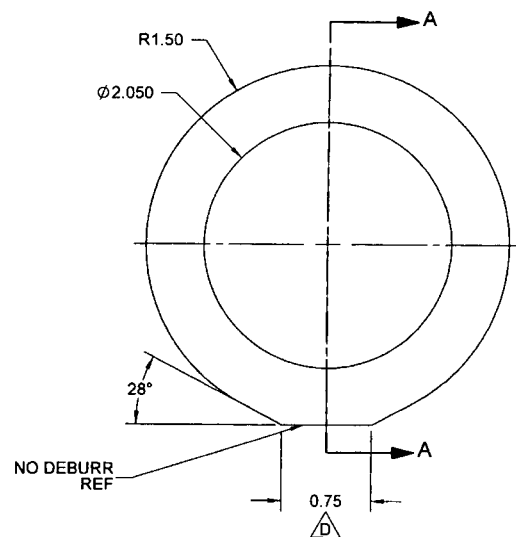
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

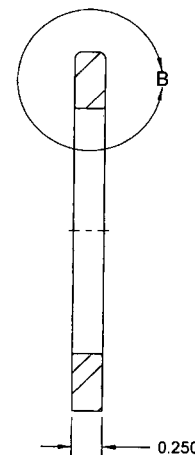
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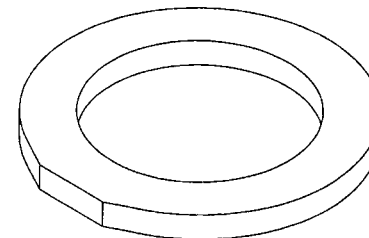
NOTE: Date & initial all entries



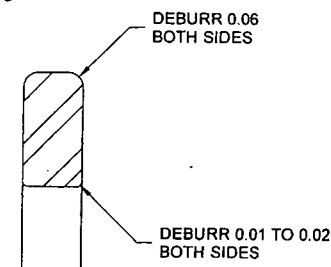
D3407-5 RING



SECTION A-A



W/O 59418



**DETAIL B
SCALE 2X**

RELEASED
08-08-01/14

- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.27 lbs

DESIGN	<i>92</i>	DART AEROSPACE USA, INC.	
DRAWN	<i>1/81</i>	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>	D3407	SHEET 4 OF 5
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DE APPR.	<i>[Signature]</i>	TOW RING	NTS
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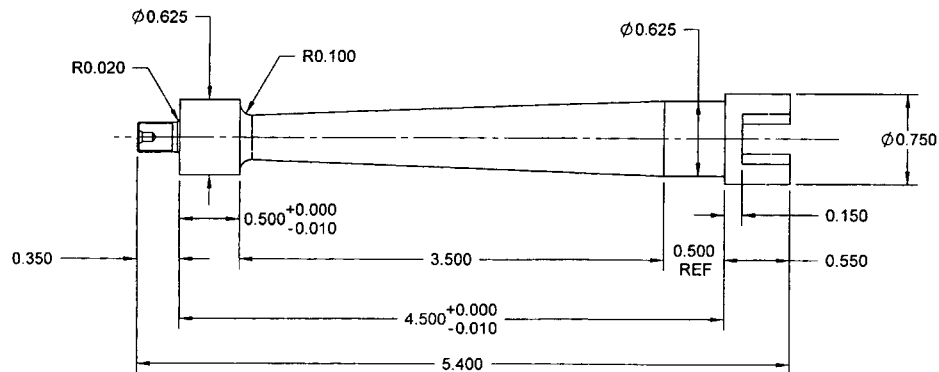
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NOTE: Date & initial all entries

0.063
REF

CENTER DRILL #2
0.125 DP

1/4-28 UNF THREAD WITH
0.063 GRIP, CLASS 2A



D3407-7 STEM

RELEASED

NOTES:

- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.34 lbs

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	IPM	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 5 OF 5
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